

Trial Examination 2023

Question and Response Booklet

QCE Biology Units 1&2

Paper 1

Student's Name: _____

Teacher's Name:

Time allowed

- Perusal time 10 minutes
- Working time 90 minutes

General instructions

- Answer all questions in this question and response booklet.
- QCAA-approved calculator permitted.
- Planning paper will not be marked.

Section 1 (25 marks)

• 25 multiple choice questions

Section 2 (25 marks)

• 4 short response questions

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SECTION 1

Instructions

- Choose the best answer for Questions 1–25.
- This section has 25 questions and is worth 25 marks.
- Use a 2B pencil to fill in the A, B, C or D answer bubble completely.
- If you change your mind or make a mistake, use an eraser to remove your response and fill in the new answer bubble completely.

| | А | В | С | D |
|----------|---|------------|------------|------------|
| Example: | | \bigcirc | \bigcirc | \bigcirc |

| | Α | В | С | D |
|--|------------|------------|------------|---------------------------------------|
| 1. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 2. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 3. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 4. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 5. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 2. 3. 4. 5. 6. 7. 8. 9. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 7. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 8. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 9. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 10. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 11. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 12. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 13. 14. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 14. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 15. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 16. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 17. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 18. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 19. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 20. | | | | Ο Ο Ο Ο Ο Ο Ο Ο Ο Ο Ο Ο Ο Ο Ο Ο Ο Ο Ο |
| 21. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 22. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 23. 24. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 24. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 25. | \bigcirc | \bigcirc | \bigcirc | \bigcirc |

SECTION 2

Instructions

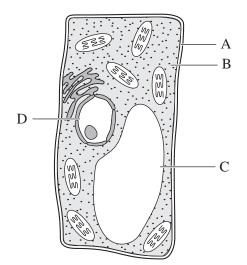
- Write using black or blue pen.
- If you need more space for a response, use the additional pages at the back of this booklet.
 - On the additional pages, write the question number you are responding to.
 - Cancel any incorrect response by ruling a single diagonal line through your work.
 - Write the page number of your alternative/additional response, i.e. See page ...
 - If you do not do this, your original response will be marked.
- This section has four questions and is worth 25 marks.

DO NOT WRITE ON THIS PAGE

THIS PAGE WILL NOT BE MARKED

QUESTION 26 (6 marks)

The diagram shows a stylised cell.



a) Identify whether this a prokaryotic or eukaryotic cell. Justify your response. [2 marks]

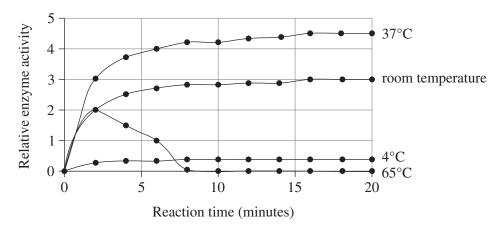
b) Complete the table by identifying the structures labelled on the cell.

[4 marks]

| | Structure name |
|---|----------------|
| Α | |
| В | |
| С | |
| D | |

QUESTION 27 (7 marks)

Samples of a digestive enzyme are placed in a water bath with a controlled temperature, and the relative enzyme activities are measured. The graph shows the effect of temperature on the activity of the digestive enzyme samples.



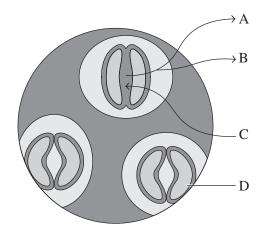
a) If the enzyme samples were removed from the water bath after 20 minutes and brought to 25°C, explain the changes to the relative enzyme activities that would be observed. [5 marks]

| What organism might utilise this enzyme in its digestive system? Justify your response with reference to the data provided. | [2 marks] |
|---|-----------|
| | |
| | |
| | |
| | |

b)

QUESTION 28 (8 marks)

The diagram shows a stylised view of the surface of a leaf under a microscope. Labels A–C represent substances moving in and out of the leaf and label D represents the specific structure that controls this movement.



a) Complete the table by identifying the components labelled on the leaf.



| | Component name |
|---|----------------|
| A | |
| В | |
| С | |
| D | |

b) Describe how a plant can maintain its water balance. Justify your response with reference to the structure identified in Question 28a). [4 marks]

QUESTION 29 (4 marks)

- a) Identify two components of the immune system that are within the blood. [2 marks]
- b) Choose one component identified in Question 29a) and describe how it helps the body fight disease.

[2 marks]

END OF PAPER

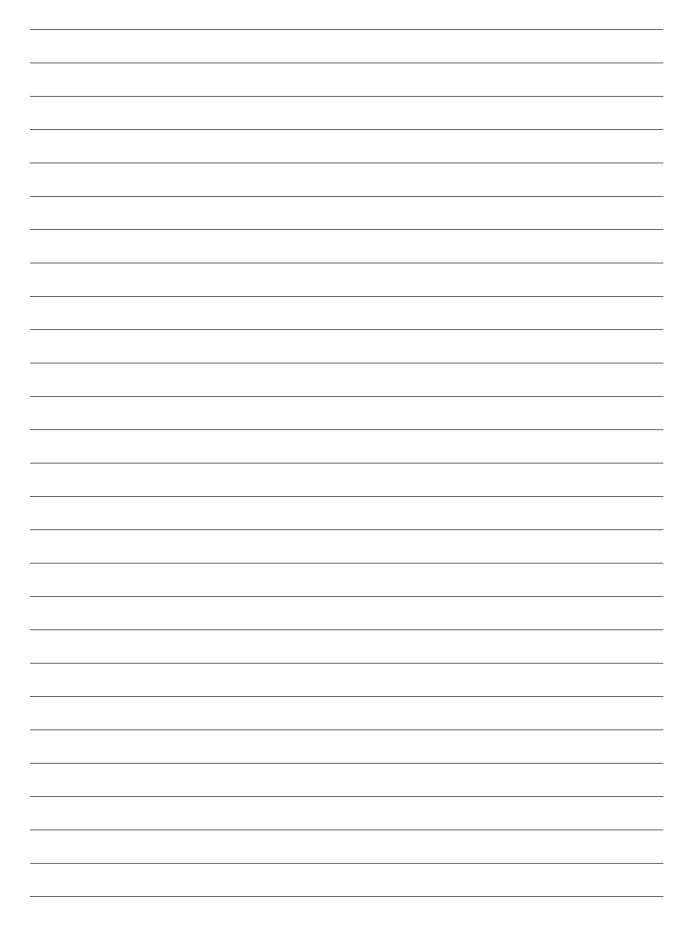
ADDITIONAL PAGE FOR STUDENT RESPONSES

Write the question number you are responding to.



ADDITIONAL PAGE FOR STUDENT RESPONSES

Write the question number you are responding to.



ADDITIONAL PAGE FOR STUDENT RESPONSES

Write the question number you are responding to.

